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# ANALYSIS OF THE EFFECT OF TAX REVENUE ON NIGERIAN ECONOMIC GROWTH

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## ABSTRACT

This study examines the impact of taxation (measured by petroleum profit tax, company income tax, custom and excise duty and value added tax) on the economic growth of Nigeria (measured by the gross domestic product). The study adopts the ex-post facto research design in the investigation. The descriptive statistics and regression analysis were used in the analysis of data collected from 2002 to 2017. The study found an insignificant contribution of Petroleum profit tax (PPT), company income tax (CIT), custom and excise duty (CED) and value added tax (VAT) to the economic growth ( gross domestic product -GDP) of Nigeria. The study recommends amongst others the need for the government to create all necessary modalities that will enhance the effective collection of taxable revenue accruable from all sources of revenue most especially the oil industry to improve the total tax accruable to the pocket of the federal government of Nigeria.

***Key Words***: Tax Revenue, petroleum profit tax, company income tax, custom and excise, economic growth Nigeria

## 1.Introduction

It is the desire of every Nation whether developed or developing to attain certain level of economic growth and development globally. This need is intense in the developing nations where economic growth and development is mostly at low level. There are also challenges of growing fiscal deficit, weak revenue mobilization, high rate of insecurity, unemployment, poverty, out of school children, inadequate infrastructure and health facilities .To surmount these challenges most nations of the world are channeling their efforts to achieve economic growth. But the extent of success to be attained largely depends on resource availability and how prudent the resources are effectively and efficiently utilized for intended purpose(s).

Tax is one of the major sources of revenue available to the government to finance its operations and meet the needs of the general public. It is used as a fiscal and macro-economic management tool that guarantees both economic and social reform as it encompass all aspect of the economy, companies, citizens and foreigners. The tax revenue will also determine the rate of economic growth in any nation of the world (Omojemite & Godwin, 2012). Though, the extent to which the government will be able to generate the required revenue to meet its ever growing need will be influenced by how well-structured is the tax system and its administration. In Nigeria the administration of tax and jurisdiction is structured in line with the government fiscal policy. The tax system consists of direct tax and indirect tax. There are taxes exclusively for the federal government, some are shared among the federal and state; some taxes are within the jurisdiction of the state while others are for the local government.

In attempt to improve mobilization of the tax revenue which is allocated monthly to the three tiers of government over the years to finance its developmental activities has been a thorny task in the country. This is due to reasons such as tax evasion, avoidance, inadequate tax revenue accounting, sharp practices associated with the administration of taxes and lack of transparency in the utilization of the tax payers money in some part of the country over the years. These affect the total tax revenue accruable to government at the same time impair the economy. Thus sustaining the level of under development of the country (Adegbie, 2010), as evident by high level of poverty, unemployment, out of school children and insecurity in the country.

This further increased the debate on how effective tax revenue influences economic growth in developing countries such as Nigeria. The studies that previously examine these issues have not been able to reach consensus. Such studies includes Ehigiamusoe (2014), Ramot and Ichihashi (2012), Haq- padda and Akram (2011), Poulson and Kaplan (2008) who reveals that the Nigerian tax system has no significant impact on economic growth but custom duties has more influence on economic growth than company income tax, value added tax and petroleum profit tax. This may be due to the high rate of imports in the country. As import increases, the duties on imports will continue to experience growth, and ultimately increase output. But studies of Nwadialor and Ekezie (2016), Adudu and Ojonye(2015), Ojong, Oga and Arikpo(2016), Ogbonna and Ebimobowei(2012), Onakoya and Afintinni (2016) shows that tax has a significant influence on economic growth in Nigeria. There is a positive relationship between petroleum profit tax revenue with economic growth, and a positive relationship between company income tax and economic growth but a negative relationship between customs and excise duties with economic growth.

Despite extensive research in this area there is no consensus at present, as most of the studies cited above largely covered period when oil was the main source of income to the nation. But failed to cover substantially the democratic period, when the nation economy experience economic meltdown and recession which slow down economic activities, fall in oil prices and reduced tax revenue. The nation also witnessed several tax reforms with a view to expand the non oil tax revenue, increase tax net generally and intensify the fight against corruption which may prevent diversion of resources (tax revenue), increase tax revenue and enhance economic growth. This clearly shows the need to re examine the influence of tax revenue on the economic growth of Nigeria during the incessant democratic period. It is in view of this that the present study seeks to determine the effect of tax revenue on economic growth in Nigeria. The study specifically:

i. determine the effect of petroleum profit tax on the growth of the economy of Nigeria.
ii. examine the effect of company income tax on the growth of the economy of Nigeria.
iii. ascertain the effect of custom and excise duties on the growth of the economy of Nigeria.
iv. investigate the effect of value added tax on the growth of the economy of Nigeria.

This study is another modest way to assist the government, tax professional and other stakeholders to know the influence of tax revenue on economic growth of Nigeria during democratic period. The study covers a period of sixteen years from 2002 to 2017. The period is during the uninterrupted democratic government in Nigeria, which wetness economic meltdown, recession and several tax reforms to expand non tax oil revenue, tax net and tax revenue generally. This paper is divided into five sections namely: introduction, review of related literature, methodology, discussion of results and conclusion.

## 2. Review of related literature

The related concept of tax revenue and economic growth, theories and empirical studies are discussed below.

### 2.1. Concept of Taxation, Tax Revenue and economic growth

The understanding of what is taxation and tax revenue is very important in this study. Taxation according to Omotosho (2001) is a compulsory levy imposed by a public authority on the income of individuals and companies as specified by the government decrees, acts or case laws irrespective of the exact amount of services rendered to the payer in return. Jarkir (2011) view tax as a compulsory transfer of resources from private to public sector, levied on the basis of predetermined criteria. It can be used as a tool for social engineering to stimulate the general or special economic growth. Onairobi (1994) further add that there are two types of taxes namely direct and indirect. A direct tax is levied on income or profit but an indirect tax is levied on expenditures. Good examples of direct tax include personal income tax, capital Gain Tax, and profit tax. While Excise and custom duties Taxes, Export Taxes, and Import Duties, Expenditure Tax, sales tax and value added tax are examples of indirect tax.

Tax revenue is income generated from taxes such as petroleum profit tax, companies income tax, custom and excise, and value added tax by the Government to be used for the good of the society. The current Nigerian Law empowers the three tiers of government with each of the tiers having a clear spelt out approved list of taxes and levies for collection as their tax revenue. The objective of tax revenue based on the classical economists is to raise government revenue. But due to the changes in circumstances and ideologies, the aim of taxes has also been changed from the objective of raising public revenue. Taxes are levied in addition to raising revenue to influence consumption, production and distribution to guarantee social welfare through the economic development of a country. The extent of tax revenue generated by the government at any point in time will determine how the Federal, State and Local government will achieve their objectives. Thus, it is evident that whenever a good tax structure is in existence it plays a multiple role in the process of economic development of any nation (Nzotta 2007 & Appah, 2010) which Nigeria is not an exception.

However, there are concerns expressed about the low level of productivity of the tax system to be able to raise the required funds to finance the ever growing expenditure of government in Nigeria. This is due to deficiencies in the administration of tax at the three tiers of government , collection system, complex legislation and apathy especially on the part of those outside the tax net (Ariyo, 1997). In order to improve the tax revenue so as to change the situation many countries including Nigeria undertook tax reforms. Such reform includes introduction of Federal Inland Revenue Service (FIRS), Tax Payer Identification Number (TIN), E-payment, Voluntary Asset and Income Declaration Scheme (VAIDS), and strict tax enforcement. All these efforts led to the improvement in tax revenue and tax administration especially after the recession period in Nigeria. Most of these reforms focused on tax structure rather than on tax administration geared towards generating more revenue from existing tax sources (Osoro, 1991; Ariyo 1997). To Unegbu and Irafin (2011) who posits that the Nigerian tax system has undergone several reforms geared at enhancing tax administration with minimal enforcement cost.

Despite this improvement, there are still contentious issues that require urgent attention such as the appropriate tax authority to administer several taxes, the issue of multiple taxes severally administered by the three tiers of government which sometimes imposes welfare cost and the issue of the paucity of data base, which contributes to tax avoidance in the country (Unegbu & Irafin 2011). Others include corruption in tax administration; reduce confidence and trust of the tax payers in discharging their civic duty due to the deplorable level of infrastructure in the country state. Thereby making them to wonder what the tax revenue collected are used for. According to Oni (1998), the challenge of tax administration in the 21st Century and Nigeria in particular is how to encourage professionalism, accountability and increase the general public tax awareness. The imperatives and benefits of tax revenue includes: promoting economic activity, facilitating savings and investment and generating strategic competitive advantage. This is important because Tax revenue is a major source of fund for any government and the availability of fund is a very crucial aspect of running a state. Nevertheless, several options according to Soyode and Kajola (2006) are available to governments for raising fund but tax revenue remains the principal source (Kiabel & Nwokah, 2009) to finance its operations and enhanced economic growth.

Economic growth refers to the long term expansion of the productive potentials of any given economy. Such expansion or growth may be due to increase in the output which an economy produces over a given period of time. The increase in the country's output is measured by Gross Domestic Product (GDP). Therefore, the GDP is an economic model that reflects the value of a country's output measured in monetary terms over a period of time. The growth in physical stocks, growth in the size of an active labour force, growth in the quantity of labour as a result of training and human capital development, technological improvement and increase in the demand for goods and services is used as the determinants of economic growth. This explains why GDP is applied as proxy for economic growth. Gross Domestic Product, the primary measure of an economy's performance is its annual total output of goods and services or its aggregate output. Aggregate output is labeled as gross domestic product. Gross domestic product is the total market value of all final goods and services produced in a given year.

The GDP determination in the short run depends on the behaviour of key categories of aggregates spending, consumption, investment, government spending and net exports. As a necessary condition the GDP to be in equilibrium, that is the desired domestic spending equals actual output. GDP attaches monetary measure to goods produced within an economy because it is used for comparative analysis between years. Based on these GDP is a measure of the value added to material residents and other input in the production of goods and services by residents and organizations before allowing for depreciation or capital consumption. The estimates produced; measure GDP at basic prices which is also referred to as gross value added (GVA). To measure aggregate output accurately, all goods and services produce in a particular year must be counted only once. Base on this, GDP includes only the market value of the final goods already included. This is because the value of the final goods already includes the value of all intermediate goods that are used in producing them.

## 2.2 Theoretical Framework

The socio-political theory, Faculty theory, Benefit received theory and expediency theory are discussed below.

**Socio-Political Theory:** This theory is based on Thomas Hobbes social contract when man lived in the state of nature where there was hardship, no government and rule to regulate them. Therefore in selecting taxes the social and political objectives should be the major factors. The theory states that a tax system should not be intended to serve individuals, but should be used to cure the ills of society as a whole. The theory did not believe in individual approach to problems but that each economic problem should be looked at in its social and political context so as to be able to establish a suitable solution. This welfare approach in adopting tax system is to care and preserve the society and its individual's members. Reduce income inequalities and control the ownership of property and its inheritance in the interest of the society as a whole. The ideas advance in this theory though much criticized at that time, are now the hallmark of fiscal policies of modern state. This theory is related to the present study as we seek to examine the tax revenue is used to address the challenges such as insecurity, out of school children, poverty and unemployment thereby influencing economic growth of Nigeria.

**Benefit Received Theory:** This theory which is also known as vertical equity is based on the assumption that there is an exchange link between tax-payers and the state. This is because the state provides certain goods and services to the members of the society and they should be taxed in the same proportion to the benefit received (Bhartia, 2009). It therefore means that the more benefit one receives from the government the more tax he or she is expected to pay to the government who is the provider of these resources. Anyanfo (1996) in support this view argued that taxes should be allocated on the basis of benefits received from government expenditure. However, this theory suffers many drawbacks: First, if the State maintains a certain connection between benefits confers and benefits derived, it will be against the basic principle of the tax that expenses of the government is to meet the provisions of general benefits. it is not possible to implement the benefit received theory precisely due to the complexities of ascertaining the actual amount of government benefits utilized by an individual in a year. Secondly, the theory is not in accordance with modern principle of income taxation in a purely domestic context. This is because the States do not condition government benefits upon recipients' payment of taxes. But to solve some problem in society, this explains why some taxpayers receiving the largest government benefits may be those due to their status pay the least taxes. Thirdly, most of the expenditure incurred by the State is for the general benefit of its citizens. If this theory is applied in practice, then the poor will have to pay the heaviest taxes, because they benefit more from the services of the State. This will be against the principle of justice and equity if the poor are to pay more taxes, it is against.

**Faculty Theory**: This is otherwise known as the ability to pay theory is the most popular and commonly accepted principle of equity or justice in taxation. It states that citizens of a country should pay taxes to the government in accordance with their ability to pay. This implies that people with higher incomes should pay more taxes than people with lower incomes. Anyanfo (1996) stressed that this theory states that one should be taxed according to the ability to pay. It is an attempt to maximize an explicit value judgment about the distributive effects of taxes. Bhartia (2009) argue that a citizen is to pay taxes just because he can, and his relative share in the total tax burden is to be determined by his relative paying capacity. It appears very reasonable and just that taxes should be levied on the basis of the taxable capacity of an individual. However, the problem arises with the definition of ability to pay. The economists are not agreement as to what should be the precise measure of a person's ability to pay. The main viewpoints put forward in this connection are as follows:

**(a) Ownership of property:** Some economists are of the view that ownership of the property is a very good basis of determines one's capacity to pay. This idea is discarded on the basis that if a person earns large income but does not spend on buying any property, he will then escape taxation. But if another person earning small income buys property, he will be subjected to taxation. Thus, it is unjustifiable that a person who earns large income is exempted from taxes and another person with small income is taxed.

**(b) Tax on the Basis of Expenditure:** It is argued that some economists are of the opinion that the ability to pay tax should be based on the expenditure which a person incurs. The larger the expenditure, the higher should be the tax and vice versa. This viewpoint is unfair, because a person having large family to support spends more than a person having small family. If we make expenditure as the test of one's ability to pay, the former person who is already burdened with many dependents will have to pay more taxes than the latter that has a small family. This is unjustifiable.

**(c) Income as the Basics:** Most of the economists are of the opinion that income should be the basis of measuring a man's ability to pay. It appears just and fair that if the income of a person is greater than that of another, the former should be asked to pay more towards the support of government than the latter. That is why in modern tax system of the countries of the world, income has been accepted as the best test for measuring the ability to pay.

**Expediency Theory:** The theory assumes that every tax proposal must pass the test of practicality and it must be the only consideration weighing with the authorities in selecting a tax proposal. Economic and social objectives of the state and the effects of a tax system should be treated irrelevant (Bhartia, 2009). Anyafo (1996) posits that the expediency theory is based on a link between tax liability and state activities, therefore, the state should charge the members of the society for the services provided by it. This way of thinking however justifies imposition of taxes to finance state activities by inferences. It provides a basis, for apportioning the tax burden between members of society. This proposition has a truth in it, since it is useless to have a tax which cannot be levied and collected efficiently.

There are pressures from economic, social and political groups. Every group tries to project and promote its own interests and authorities are often forced to reshape tax structure to accommodate these pressures; In addition, the administrative set up may not be efficient to collect the tax at a reasonable cost of collection. Tax revenue provides a powerful set of policy tools to the authorities and should be effectively used to correct both economic and social ills of the society. Such ill includes income inequalities, regional disparities, poverty, unemployment and cyclical fluctuation.

Several theories are explained above but this study will be based on the expediency theory to assist us examine the effect of tax revenue on economic growth in Nigeria. This is due to the fact that the theory posits that taxes are collected to accomplish economic objectives which enhance the growth and development of a society in all its spheres. The other theories such as the socio-political, Benefit and Faculty theories are relevant to this study but they place more emphasis on political, relationship and ability to be objective. It will also determine accurate tax revenue projection and targets of specific tax revenue sources such as PPT, CIT, CED and VAT given a determined profile of economic development. Thus assisting in the estimation of a sustainable revenue profile and facilitating effective management of a country's fiscal policy among others.

**2.3 Empirical Studies**

The related studies in this are reviewed below. The study of Ionkwe and Agu (2019) investigates the relationship between total tax revenue and economic growth in Nigeria. Time series data were collected from the Central Bank of Nigeria statistical bulletin, Federal Inland Revenue Service and National Bureau of Statistics on different types of total tax revenue and economic development from 1986-2016. Multiple regression analysis was used to analyzing the data. The finding reveals that there is a significant positive relationship between total tax revenue and unemployment in Nigeria. The study concludes that total tax revenue relates positively to unemployment and recommends that government should distribute its social welfare programmes in such a way to provide direct benefit to tax payers. This makes them believe that the portion of their hard earned money paid for purposes, is being effectively utilized by the government. The tax official need an improvement through adequate training and provision of suitable working materials and facilities.

Ouma (2019) investigates the effect of tax reforms, economic growth and political environment on total tax, direct tax and indirect tax revenues from a period of 1964-2016. The data collected were analyzed using descriptive statistics, multi-segment regressions and nonlinear regression. Findings of the study shows that all taxes responded positively to each of the tax reforms; changes in all taxes were influenced by the reforms because GDP was also growing; economic growth has positive significant effect on all the categories of taxes; Government effectiveness has positive impact on indirect taxes; and that even though government control of corruption effect on tax revenues is statistically insignificant, it could promote the revenue generation more than economic growth.

Ali, Ali and Mohamed (2018) study the effect of tax revenue and economic growth of Kenya. They examine the effect of domestic revenue, grants (foreign aid) on economic growth from 1980 to 2007. Date on Real Gross Domestic product that is GDP at factor prices deflated by the consumer prices index (at constant factor cost), Aggregate Tax Revenue and Grants and other Revenues used in this study was collected from World Bank and IMF from 1980 to 2007. The ordinary least square method was used to analyze the data. The result reveals that tax revenue has a positive significant consequence on economic growth. Specifically there is a positive significant impact of domestic tax revenue on economic growth but grants (foreign aid) have a negative impact on economic growth of Kenya. This entails that grants is not a substitute for domestic revenue generation as domestic revenue is the more vital of the two variables.

Onakoya and Afintinni (2016) study investigates taxation and Economic growth, in Nigeria for sixty six years from 1980 to 2013. The instrument used to ascertain whether a long run relationship existed between the Petroleum Profit Tax, Company Income Tax, Customs and Excise Duties and Real Gross Domestic Product was Engle-Granger co integration test. That study found that a long run relationship existed between taxation and economic growth in Nigeria. The study also found that there was significant positive relationship between petroleum profit tax, company income tax and economic growth. However, the relationship between economic growth and customs and Excise Duties was negative.

In the study of Akhor and Ekundayo (2016) examined the impact of indirect tax revenue on economic growth in Nigeria. Specifically the study evaluate the impact of value added tax revenue, custom and excise duty revenue on the economic growth (measured by real gross domestic product) of Nigeria from 1993 to 2013. The value added tax revenue, custom and excise duty revenue, and real gross domestic product data collected from the Central Bank of Nigeria, Nigerian Investment Promotion Commission and Securities and Exchange Commission publications were analyzed using descriptive statistics, correlation, unit root test cointegration test and error correction model regression. The study shows that there is a negative and significant impact of value added tax on real gross domestic product. The finding of the study also found that there is a negative and weakly significant impact of past custom and excise duty revenue on real gross domestic product.

Ojong, Ogar and Arikpo (2016) investigates the relationship between petroleum profit tax and Nigeria economy, the impact of company income tax on the Nigerian economy and the effectiveness of non-oil revenue on the Nigerian economy. Data were extracted using desk survey method. Ordinary least square of multiple regression models was used to establish the relationship between tax revenue and Economic growth. The study found that there is significant relationship between petroleum profit tax and the growth of the Nigeria economy. They also that there is significant relationship between non-oil revenue and the growth of the Nigeria economy, the study also found that there is no significant relationship between company income tax and the growth of the Nigeria economy.

Nwadialor and Ekezie (2016) carried out the effect of tax policy on economic growth in Nigeria. The annual time serial data of 20 years from 1994-2013 was used for the study. The study examines specifically the relationship between tax reforms, direct tax and indirect tax on economic growth on Nigeria. Data collected from the Federal Inland Revenue service annual report and Central bank of Nigeria statistical bulletin were analyzed using OLS regression analysis Techniques. The study revealed that tax have significant effect on the economic growth in Nigeria, indirect tax have a strong positive significant relationship with the level of economic growth in Nigeria, Direct tax showed a weak relationship between economic growth and direct tax policy (CIT, PPT) within the study period.

Jones and Daberechi (2016) carried out an empirical assessment of the impact of tax reforms on the economic growth of Nigeria, using the ordinary least squares based multiple regression was adopted to analyses the data collected from sampled firms for the period of 1985-2011. The study found that customs and excise duties, value added tax, personal income tax and education tax have no statistical significant impact on economic growth at 5% level of significance. However, petroleum profit tax and company income tax each has positive significant impact on economic growth at 0.35% and 2.87% level of significance respectively. The study therefore concludes that overall, tax reforms have significant impact on economic growth in Nigeria.

Michael and Ebiware (2016) carried out study on taxation and economic growth in a developing Economy. The method of data analysis was the ordinary least square for the period under investigation from 2000 to 2012. The result shows that there is a strong relationship between taxation and economic growth in Nigeria. Adudu and Ojonye (2015) investigate the impact of tax policy on economic growth in Nigeria. The time series data collected between 1990 and 2011 were analyzed with the Granger-causality cointegration framework. The study finds statistical evidence that efficient tax reforms are necessary conditions for enhanced sustainable economic growth. This view is also supported by Okoli, Njoku and Kaka (2014) who carried out an empirical analysis of taxation and economic growth in Nigeria covering the period 1994-2012 using the Granger causality approach. They found that a significant positive relationship exists between taxation and economic growth in Nigeria.

Ibadin and Oladipupo (2015) examine the impact of indirect taxes on economic growth of Nigeria. Data on Value Added Tax, Petroleum Profit Tax, Custom and Excise Duties, and Real Gross Domestic Product (RGDP) was collected thirty-four year period from 1981 to 2014. The OLS model technique was used for data analyses. The finding indicates that value Added Tax and petroleum profit tax have a positive and significant relationship on the real gross domestic product. Custom and excise duty of two period lags has a positive relationship on real gross domestic product and value added tax of two-period lags showing a negative but significant relationship with real gross domestic product.

Edame and Okoi (2014) carry out study on the impact of taxation on investment and Economic Development in Nigeria. The study examines the impact of taxation on investment and economic growth in Nigeria from 1980-2010. The ordinary least square method of multiple regression analysis was used to analyze the data. The finding is that taxation is negatively related to the level of investment and output of goods and services (GDP) and is positively related to government expenditure in Nigeria. The study observed that taxation statistically is a significant factor influencing investment, GDP and government expenditure in Nigeria.

Matthew (2014) carried out study on the impact of tax revenue on Nigerian Economy. Descriptive survey design was adopted and simple random sampling technique was used in the selection of the sample size. One hundred copies of questionnaires were administered to workers of the Federal Board of Inland Revenue (FBIR), Lagos, Nigeria four hypotheses were formulated and tested using chi-square statistical tool of analysis. The findings show that tax revenue significantly impact on Federal Government Budget Implementation in Nigeria. Tax administrative system significantly affected the revenue generated in Nigeria. Tax evasion significantly affected government revenue in Nigeria and lack of training on the part of tax officers significantly affected the generation of government revenue in Nigeria.

## 3. Methodology

The Ex-post facto research design is used for this study to ascertain the influence of tax revenue on economic growth of Nigeria. The data needed was obtained mainly from the Central Bank of Nigeria (CBN) and the federal Inland Revenue for the period of 2002-2017. The tax revenue data collected was from petroleum profit tax, custom and excise duties, company income tax and value added tax. The Ordinary Least Square Regression Techniques was used to analyze the influence of tax revenue on economic growth. Variables used are the dependent and independent: Dependent variable is economic growth measured by Gross Domestic Product, while Tax Revenue is independent variable and is measured by petroleum profit tax, custom and excise duties, company income tax and value added tax.

The model specification used here to captures the effect of petroleum profit tax, company income tax, custom and excise duties and value added tax on economic growth is thus:

GDP = f(PPT, CIT, CED, VAT) from the above function, therefore

$$GDP = a + \beta_1 PPT_t + \beta_2 CIT_t + \beta_3 CED_t + \beta_4 VAT_t + e$$

Where,

GDP = Gross Domestic Product.
PPT = Petroleum Profit Tax
CIT = Company Income Tax
CED = Customs and Excise Duties
VAT = Value -Added Tax
$\alpha$ = constant
$\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$ are the coefficient of the parameter estimate.
e = error term.

**Apriori Expectation:** The coefficients of all the independent variables in the model are expected to be positive signs of +1>0 based on theory. That is $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0$

## 4. Results and Discussion

The result of the data collected from 2002 to 2017 and analyzed is presented below. Table 1 is the descriptive statistical which shows all the variables: Gross Domestic Product (GDP), Petroleum profit tax (PPT), Company income tax (CIT), custom excise duty (CED) and value added tax (VAT) used in this study. It presents information about the mean, median, minimum value, maximum value statistics and the distribution of the sample measured by skewness, kurtosis and the Jaque-Bera statistic.

**Table 1: Descriptive Statistics**

| | RGDP_N__ BILLION | PPT_N__BI LLION | CIT_N__BIL LION | CED_N__BI LLION | VAT_N__BI LLION |
|---|---|---|---|---|---|
| Mean | 51238.75 | 2124.557 | 604.7500 | 360.6250 | 503.0375 |
| Median | 52234.18 | 1853.150 | 612.7000 | 303.3500 | 515.6500 |
| Maximum | 69023.93 | 4365.400 | 1207.300 | 628.0000 | 967.7000 |
| Minimum | 28957.71 | 392.2000 | 89.10000 | 177.7000 | 108.6000 |
| Std. Dev. | 14072.99 | 1196.653 | 403.2325 | 155.9726 | 290.8976 |
| Skewness | -0.133936 | 0.539694 | 0.122872 | 0.348498 | -0.012594 |
| Kurtosis | 1.589813 | 2.158936 | 1.567879 | 1.612662 | 1.525134 |
| Jarque-Bera | 1.373589 | 1.248311 | 1.407575 | 1.607006 | 1.450575 |
| Probability | 0.503186 | 0.535714 | 0.494708 | 0.447758 | 0.484185 |
| Sum | 819820.0 | 33992.91 | 9676.000 | 5770.000 | 8048.600 |
| Sum Sq. Dev. | 2.97E+09 | 21479670 | 2438947. | 364911.7 | 1269321. |
| Observations | 16 | 16 | 16 | 16 | 16 |

***Source:*** **E-view Output.**

The results of the descriptive statistics as presented in Table 1 above show a mean value of N51238.75 billion and a standard deviation of N14072.99 billion in respect to RGDP. This implies that the average RGDP during the period under study (i.e.2002-2017) stood at N51238.75 billion during the period under study. An inference from these figures implies that the RGDP is appreciably high during the period under study. The maximum mean and minimum mean during the period stood at N 69023.93 billion and N28957.71 billion. This indicates that all the series display a high level of uniformity as their mean and median values are continuously within the maximum and minimum values of these series.

The table further indicates a mean value of N2124.557 billion with a fluctuation of N1196.653 billion in respect to petroleum profit tax. This indicates that on average, the revenue generated from petroleum profit tax stood at N2124.557 billion during the period under study. The result indicates that there is higher dispersion from the mean value of PPT recorded within the period of study. The highest PPT recorded within the study period is 4365.400 billion with a minimum value of 392.2000 billion.

Also, the table further revealed a mean of N604.7500 billion with a fluctuation of N403.2325 billion in respect to company income tax. This indicates that on average, the revenue generated from company income tax stood at N604.7500 billion during the period under study. The result indicates that there is higher dispersion from the mean value of CIT recorded within the period of study. The highest CIT recorded within the study period is 1207.300 billion with a minimum value of 89.100 billion

More so, the result reveals a mean of 360.6250 billion in respect to custom excise duty (CED) with a fluctuation of 155.9726 billion. This implies that on average, CED in Nigeria stood at 360.6250 billion. The result indicates that there is higher dispersion from the mean value of CED recorded within the period of study. The highest CED recorded within the study period is 628.0 billion with a minimum value of 177.7000 billion.

Finally, the result reveals a mean of 503.037 billion for value added tax (VAT) with a fluctuation of 290.8976 billion. This implies that on average, VAT in Nigeria stood at 503.0375 billion. The result indicates that there is higher dispersion from the mean value of VAT recorded within the period of study. The highest VAT recorded within the study period is 967.7 billion with a minimum value of 108.6 billion.

**The diagnostics tests of normality and multicolinearity was carried out to ensure the robustness and reliability of the study results.**

To test for Normality, the Jarque-Bera test statistics is used to test for normality in the time series data variables use. The general rule is that, if the residuals are normally distributed, the histogram would be bell-shaped and the Jarque-Bera statistic would not be significant. The result as shown from table 1 indicates that the data used is normally spread at either 1% or 5% level of significance as the Jarque-Bera probability is above 0.05 (i.e. p-value of 0.88> 0.05).

***Table 2:*** **Variance Inflation Factors**

Variance Inflation Factors
Date: 11/11/18 Time: 14:29
Sample: 2002 2017
Included observations: 16

| Variable | Coefficient Variance | Uncentered VIF | Centered VIF |
|---|---|---|---|
| PPT_N__BILLION | 0.461760 | 3.3944 | 1.46585 |
| CIT_N__BILLION | 121.2803 | 4.6002 | 3.71602 |
| CED_N__BILLION | 292.7742 | 5.8247 | 5.78951 |
| VAT_N__BILLION | 224.5161 | 6.4614 | 2.11794 |
| C | 7701462. | 1.2113 | NA |

***Computed fromE-Views Version 8 Output***

The Variance Inflation Factor (VIF) statistics was used to test for presence of multicolinearity in this study model. The results of the variance inflation factor (VIF) as presented in table 2 reveals the absence of multi-collinearity among the variables as the RGDP, PPT, CIT, CED and VAT have VIF that are less than 10 based on the rule of thumb. In line with the rule the VIF will be cause for concern when it is above 10 indicating high correlation among variables or when it is 2.5 or above to a more conservative level. Thus, based on the rule of thumb the model can be adjudged to be fit and robust.

**Table 3: Regression Result**

Dependent Variable: RGDP_N__BILLION
Method: Least Squares
Date: 11/11/18 Time: 14:11
Sample: 2002 2017
Included observations: 16

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| PPT_N__BILLION | 0.120268 | 0.679529 | 0.176988 | 0.8627 |
| CIT_N__BILLION | 13.45358 | 11.01273 | 1.221638 | 0.2474 |
| CED_N__BILLION | -0.457182 | 17.11064 | -0.026719 | 0.9792 |
| VAT_N__BILLION | 29.24756 | 14.98386 | 1.951937 | 0.0769 |
| C | 28299.44 | 2775.151 | 10.19744 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.974946 | Mean dependent var | 51238.75 |
| Adjusted R-squared | 0.965835 | S.D. dependent var | 14072.99 |
| S.E. of regression | 2601.213 | Akaike info criterion | 18.81565 |
| Sum squared resid | 74429411 | Schwarz criterion | 19.05708 |
| Log likelihood | -145.5252 | Hannan-Quinn criter. | 18.82801 |
| F-statistic | 107.0120 | Durbin-Watson stat | 1.231133 |
| Prob(F-statistic) | 0.000000 | | |

***Source:*** **E-view output.**

Table 3 above shows an intercept of 28,299.44 billion, which implies that when all the other variables are not considered, GDP will be estimated by 28,299.44 caused by factors not incorporated in this study. The table also reveals a positive coefficient of 0.120268 at an insignificant p-value of 0.8627 in respect to **petroleum profit tax (PPT) indicating a** positive impacts on the gross domestic product (GDP) of Nigeria. This means that, a unit change in **value of petroleum profit tax (PPT) will** cause an insignificant improvement in the gross domestic product by 0.120268.

Company income tax (CIT) as presented in table 3 has a beta coefficient of 13.45358 at an insignificant p-value of 0.2474. Thus, indicating an insignificant positive impact of CIT on GDP. This implies that, a unit change in company income tax (CIT) **will** lead to a significant improvement in the gross domestic product (GDP) by 13.45358.

In addition, custom and excise duties (CED) show a negative beta coefficient of -0.457182 at an insignificant p-value of 0.9792. Thus, indicating an insignificant negative impact on of CED on GDP. This indicates that a unit change in custom excise duties (CED) **will** lead to a significant negative variation in the gross domestic product by -0.457182.

Finally, table further reveals that **value added tax (VAT) has** a positive coefficient of 29.24756 at an insignificant p-value of 0.0769, **indicating a** negative impact of VAT on the gross domestic product (GDP) of Nigeria. This implies that, a unit change in **value added tax (VAT) will** lead to an insignificant improvement in the gross domestic product by 29.24756.

On our apriori expectation the result shows a negative relationship between the slope coefficients of PPT ($\beta_1$), CIT ($\beta_2$) and VAT ($\beta_4$) which is in line with our apriori expectation while the negative relationship between the slope coefficients of CED ($\beta_3$) goes divergent to our apriori expectation which was positive. The result of the real gross domestic product shows a positive intercepts ($\beta_0$) which is also in line with our apriori expectation. The implication of the result shows that, PPT, CIT and VAT insignificantly improves economic growth of Nigeria measured by gross domestic product but CED insignificantly brings about a reduction in the level of Nigeria economic growth. The coefficient of determination ($R^2$) is 0.9749, which means that 97.49% of the variation in dependent (GDP) can be explained by the explanatory variables (PPT, CIT, CED and VAT), while the other 2.51% not explained by other variables not included in the model.

**Discussion of Findings**

The result reveals that petroleum profit tax (PPT) is positive but insignificantly influence the gross domestic product (GDP) of Nigeria. The positive insignificant effect of petroleum profit tax (PPT) may be due to high incidence of corruption that has overwhelmed the petroleum sector, thereby inhibiting the proper remittance of revenue accruable to government. This study finding is consistent with that of Ehigiamusoe (2014) who found no significant influence of PPT on economic growth of Nigeria. But the present study findings is in contrast with that of Jones and Daberechi (2016), and Ojong, Ogar and Arikpo (2016) who found a significant influence of petroleum profit tax (PPT) on the gross domestic product (GDP) of nigeria.

This study also indicates that company income tax (CIT) is positive but insignificantly influence economic growth of Nigeria. The insignificant effect of company income tax may be that companies are exploring the exited loopholes in the tax laws to evade and avoid tax liability. This study finding is in agreement with that of Adegbie & Fakile, (2010), Ehigiamusoe (2014) and Ojong, Ogar and Arikpo (2016) who found an insignificant relationship between company income tax and Nigerian economic growth. But disagree with findings of Michael and Ebiware (2016).

Findings of the study shows that custom and excise duty (CED) is negative but insignificantly affect the GDP of Nigeria. The insignificant influence of custom and excise duties (CED) may be due to high incidence of corruption associated with tax administration which may restrain proper remittance of custom sector revenue to government. The result is in line with that of Jones and Daberechi (2016) who found that there is a statistical insignificant influence of Customs and Excise Duties on economic growth. The finding is however in contrast with findings of Akhor and Ekundayo (2016).

Finally, the result shows that value added tax (VAT) is positive but insignificantly affect the GDP of Nigeria. The insignificant influence of value added tax (VAT) may be due to federal government payment of subsidy on most of the imported goods and service. This is consistent with that of Jones and Daberechi (2016) who found that VAT has no significant effect on economic growth and Unegbu and Irefin (2011) who found an insignificant impact of VAT on gross domestic product (GDP) of Nigeria. But contrast with that of Akhor and Ekundayo (2016).

**5.Summary and Conclusion**

This study empirically examines the impact of the extent to which taxation impact on the economic growth of Nigeria from 2002 to 2017. The analysis conducted using the ordinary least square regression and the test of the research hypotheses the result shows that , there is positive but insignificantly influence of Petroleum profit tax (PPT), Company income tax (CIT) and Value added tax (VAT) on economic growth (gross domestic product -GDP) of Nigeria while Custom and excise duty (CED) has a negative but insignificantly effect on economic growth (gross domestic product -GDP) of Nigeria. Based on the result, we concludes that tax revenue is during the democratic period does not significantly influence the economic growth of Nigeria when examined in terms of Petroleum profit tax (PPT), Company income tax (CIT), Custom excise duty (CED) and Value added tax (VAT).

The following recommendations are made:

1. The federal government of Nigeria should create all the necessary modalities that will enhance the effective collection of the total revenue (PPT,CIT, CED,VAT) accruable to the nation. Such measure could include a speedy passage and implementation of the necessary laws such as the petroleum bill and curbing of corruption inherent in the tax administration in Nigeria.
2. The federal Inland Revenue should sit up in their duties of assessment and collection of taxes from companies operating in the country. This could help the government to derive more taxes from these companies.
3. Income taxes accruable from custom excise duties should be remitted to the coffers of the federal government. This will help to serve as a boast to the total revenue of the federal government.
4. Government should reduce the extent to which it subsidizes consumable goods imported in the country since this will help to increase the income accruable from value added taxes (VAT).

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